

WHAT IS CLAIMED IS:

1. A method of manufacturing a mask comprising:
attaching to a first substrate having an opening a second substrate having a plurality of penetrating holes such that the penetrating holes are positioned within the opening, the penetrating holes set to be perpendicular to a surface of the second substrate;
forming a groove on at least one of a surface of the first substrate facing the second substrate and a surface of the second substrate facing the first substrate; and
utilizing the groove to form a flow path between the first and second substrates.
2. The manufacturing method of the mask as defined in claim 1, wherein at least part of the groove is formed around the opening.
3. The manufacturing method of the mask as defined in claim 1, wherein the first and second substrates are joined by anode coupling.
4. The manufacturing method of the mask as defined in claim 2, wherein the first and second substrates are joined by anode coupling.
5. The manufacturing method of the mask as defined in claim 1, wherein the steps of forming the second substrate includes:
forming the penetrating holes in a silicon wafer; and
cutting the silicon wafer into a shape corresponding to the second substrate.
6. The manufacturing method of the mask as defined in claim 1, further comprising:
forming a magnetic film over the second substrate.
7. The manufacturing method of the mask as defined in claim 1, wherein:
a plurality of the second substrates are attached to the first substrate;
the first substrate has a plurality of the openings; and
each of the second substrates is attached to corresponding one of the openings.
8. The manufacturing method of the mask as defined in claim 7, further comprising:
polishing surfaces of the second substrates attached to the first substrate to have a uniform height.
9. A mask comprising:
a first substrate having an opening; and

a second substrate attached to the first substrate and having a plurality of penetrating holes, the penetrating holes set to be perpendicular to a surface of the second substrate, wherein:

the second substrate is attached to the first substrate such that the penetrating holes are positioned within the opening;

a groove is formed on at least one of a surface of the first substrate facing the second substrate and a surface of the second substrate facing the first substrate; and

the groove is utilized to form a flow path between the first and second substrates.

10. The mask as defined in claim 9, wherein at least part of the groove is formed around the opening.

11. The mask as defined in claim 9, wherein the first and second substrates are joined by anode coupling.

12. The mask as defined in claim 10, wherein the first and second substrates are joined by anode coupling.

13. The mask as defined in claim 9, wherein a magnetic film is formed over the second substrate.

14. The mask as defined in claim 9, wherein:
a plurality of the openings are formed in the first substrate;
a plurality of the second substrates are attached to the first substrate; and
each of the second substrates is attached to corresponding one of the openings.

15. The mask as defined in claim 14, wherein surfaces of the second substrates attached to the first substrate are polished to have a uniform height.

16. A method of manufacturing an electro-luminescence device comprising:
forming a film of a light emitting material using the mask as defined in claim 9; and

cooling the mask by causing a fluid to flow through the flow path of the mask, in the step of forming a film of a light emitting material.

17. A method of manufacturing an electro-luminescence device comprising:
forming a film of a light emitting material using the mask as defined in claim 10; and

cooling the mask by causing a fluid to flow through the flow path of the mask, in the step of forming a film of a light emitting material.

18. A method of manufacturing an electro-luminescence device comprising:
forming a film of a light emitting material using the mask as defined in claim 11; and

cooling the mask by causing a fluid to flow through the flow path of the mask, in the step of forming a film of a light emitting material.

19. A method of manufacturing an electro-luminescence device comprising:
forming a film of a light emitting material using the mask as defined in claim 12; and

cooling the mask by causing a fluid to flow through the flow path of the mask, in the step of forming a film of a light emitting material.

20. An electro-luminescence device manufactured by the method as defined in claim 16.

21. An electronic instrument having the electro-luminescence device as defined in claim 20.

22. A method of manufacturing a mask comprising:
attaching to a first substrate having an opening a second substrate having a plurality of penetrating holes such that the penetrating holes are positioned within the opening, the penetrating holes set to be tapered;
forming a groove on at least one of a surface of the first substrate facing the second substrate and a surface of the second substrate facing the first substrate; and
utilizing the groove to form a flow path between the first and second substrates.

23. The manufacturing method of the mask as defined in claim 22, wherein at least part of the groove is formed around the opening.

24. The manufacturing method of the mask as defined in claim 22, wherein the first and second substrates are joined by anode coupling.

25. The manufacturing method of the mask as defined in claim 23, wherein the first and second substrates are joined by anode coupling.

26. The manufacturing method of the mask as defined in claim 22, wherein the steps of forming the second substrate includes:

forming the penetrating holes in a silicon wafer; and
cutting the silicon wafer into a shape corresponding to the second substrate.

27. The manufacturing method of the mask as defined in claim 22, further comprising:

forming a magnetic film over the second substrate.

28. The manufacturing method of the mask as defined in claim 22, wherein:
a plurality of the second substrates are attached to the first substrate;
the first substrate has a plurality of the openings; and
each of the second substrates is attached to corresponding one of the openings.

29. The manufacturing method of the mask as defined in claim 28, further comprising:
polishing surfaces of the second substrates attached to the first substrate to have a uniform height.

30. A mask comprising:
a first substrate having an opening; and
a second substrate attached to the first substrate and having a plurality of penetrating holes, the penetrating holes set to be tapered, wherein:
the second substrate is attached to the first substrate such that the penetrating holes are positioned within the opening;
a groove is formed on at least one of a surface of the first substrate facing the second substrate and a surface of the second substrate facing the first substrate; and
the groove is utilized to form a flow path between the first and second substrates.

31. The mask as defined in claim 30, wherein at least part of the groove is formed around the opening.

32. The mask as defined in claim 30, wherein the first and second substrates are joined by anode coupling.

33. The mask as defined in claim 31, wherein the first and second substrates are joined by anode coupling.

34. The mask as defined in claim 30, wherein a magnetic film is formed over the second substrate.

35. The mask as defined in claim 30, wherein:
a plurality of the openings are formed in the first substrate;
a plurality of the second substrates are attached to the first substrate; and
each of the second substrates is attached to corresponding one of the openings.

36. The mask as defined in claim 35, wherein surfaces of the second substrates attached to the first substrate are polished to have a uniform height.

37. A method of manufacturing an electro-luminescence device comprising:
forming a film of a light emitting material using the mask as defined in claim 30; and
cooling the mask by causing a fluid to flow through the flow path of the mask, in the step of forming a film of a light emitting material.

38. A method of manufacturing an electro-luminescence device comprising:
forming a film of a light emitting material using the mask as defined in claim 31; and
cooling the mask by causing a fluid to flow through the flow path of the mask, in the step of forming a film of a light emitting material.

39. A method of manufacturing an electro-luminescence device comprising:
forming a film of a light emitting material using the mask as defined in claim 32; and
cooling the mask by causing a fluid to flow through the flow path of the mask, in the step of forming a film of a light emitting material.

40. A method of manufacturing an electro-luminescence device comprising:
forming a film of a light emitting material using the mask as defined in claim 33; and
cooling the mask by causing a fluid to flow through the flow path of the mask, in the step of forming a film of a light emitting material.

41. An electro-luminescence device manufactured by the method as defined in claim 37.

42. An electronic instrument having the electro-luminescence device as defined in claim 41.